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A GENERAL INTRODUCTION TO THERAPEUTIC PSYCHOANALYSIS

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About fifty years ago a new theory of the origin, structure, and meaning of neuroses first sought recognition by formal psychiatry. The clinical application of the principles involved in that theory made possible a new method of treating certain neurotic illnesses. The incorporation into psychiatric thought of the basic principles of the theory marked the beginning of a vastly increased comprehension of the structure and function of the human mind. This was true for mental activity, not only in states of neurotic illness but also that existing in all degrees of variation from normal mental health to extremes of psychotic deviation. A static and essentially sterile psychiatry became more dynamic and therapeutically productive in the era ushered into its development by the concept and techniques of Freudian psychoanalysis.

Fifty years is but a short period in the growth of any new medical discovery, yet it is impossible today to read authoritative non-analytic psychiatric literature without encountering frequently terms and concepts which have originated in the psychoanalytic study and treatment of both organic and psychological illnesses. That this is so, however, by no means implies that psychoanalysis encountered no obstacles to its acceptance as a specialized branch of orthodox medicine. Its reception by general medicine did not differ essentially from that accorded other scientific contributions which involved more or less extensive disruptions of previously entertained thought. The more widely new theoretical formulations tend to depart from prevailing ideas, and the longer the older concepts have become set in rigid forms, the more extensive and intense is the reaction to the introduction of the new ideology.

Read before the William W. Keen Club, Providence, Rhode Island, April, 1940.

When one notes the nature and implications of psychoanalytic theory, it becomes evident that its concepts came with almost revolutionary rapidity into the modes of thinking which were prevalent in psychiatry fifty years ago. No other contribution to medical progress in the past few centuries encountered, however, such overwhelming rejection from within the professional realm itself as did psychoanalysis. Despite the healthy revision of earlier psychiatric concepts of mental disorder which psychoanalysis brought with it, considerable misunderstanding and rejection of psychoanalytic formulations has persisted in professional circles. It is possible that with the increasing clarification of the principles of psychoanalysis there will be further abatement of the intensity of such opposition, but that conflicting viewpoints about it will ever entirely disappear is highly questionable. The sources of such dispute between opposing systems of scientific thought lie deeply buried within the emotional realm of man's mind and arise from a phychologically conditioned necessity to believe or disbelieve a given theory. Insofar as such needs are so strongly conditioned emotionally, belief or disbelief based upon them is extremely resistant to modification by intelligence, judgment, reason, or will power. The development and present status of Freudian psychoanalysis will be better understood if we retain this thought in mind while we recall for a moment the psychiatric order into which psychoanalysis was born about fifty years ago.

Prior to 1900 a few psychiatric scholars had attempted from time to time to bring greater emphasis to bear upon the role of man's thought and feeling in the production and perpetuation of certain forms of illness. In spite of these efforts, however, the general orientation of psychiatry to mental illness remained centered upon it as necessarily arising from some gross structural or physiological defect of body organs.

For almost two thousand years hysteria had been believed to be caused by displacements or disorders of the uterus. Only skepticism greeted Astruc's contention, in the mid-eighteenth century, that men, though possessing no uteri, did suffer from hysteria. The renowned neurologist Charcot was unable to persuade the French Academy of Medicine to listen to his theory of a functional cause of hysteria and a treatment of it by psychological measures until the year 1882. When at about the same time Freud presented a case of hysteria in a man before the Vienna Neurological Society, his concepts were subjected to attack and ridicule. Some years later the same society honored him with its highest award for contributions to medical progress, and today his viewpoints with respect to the nature and treatment of hysteria have won general acceptance in psychiatry.

That disease of psychogenic origin could occur was, in truth, scarcely accepted in general medicine and psychiatry until about 1910. In 1909 the first lectures on psychoanalysis delivered in this country were given by Freud at Clark University upon the invitation of G. Stanley Hall. During the following decade the principles of Freudian psychoanalysis were extensively disseminated and accorded some degree of acceptance in all civilized countries, and the psychogenic origin of certain forms of mental illness gained increasing acceptance in orthodox medical thinking.

Some confusion of thought has arisen from the fact that the term psychoanalysis has been used with at least two different connotations. One of these has had reference to a school of psychological thought and investigation concerned with the structure and function of the normal mind. The second major use of the term has been to designate a method of clinical study of mental disturbances and a specialized form of treatment for some of them. In our present discussion our references will at all times refer to the use of psychoanalytic theory and practice in the study and treatment of illness; i.e., therapeutic psychoanalysis. In the field of theory we will limit our discussion to the concept of the unconscious mind and the phenomenon of repression. In our discussion of technique we will consider free association and the transference situation.

The basic concept of psychoanalytic theory holds that there exists in the mind of man an accumulation of childhood memories and their associated feeling-tones of which the individual is completely unaware under ordinary circumstances. This mental content is referred to as the *unconscious* mind when contrasted with the ordinary mental content of which the individual is fully aware and which constitutes the *conscious* mind. The existence of an unconscious mind was postulated centuries before the investigations of Freud. It remained for psychoanalysis, however, to demonstrate the significance of the unconscious mind in the development of mental disorders ranging from mild neuroses to severe psychoses. To understand the origin and function of unconscious thought and feeling we must turn our attention to certain conditions which pertain to the early period of growth and development of the individual.

During the first weeks and months of life the infant seeks full and immediate gratification of every wish and need. This he does without concern for adult standards of acceptable behavior. The earliest impulses which move the infant to behavior and produce feeling-tones spring from his inborn instinctual demands. The most primitive of all instincts, that of self-preservation, stimulates much of the infant's behavior in the early months of life and finds representation in the demand for adequate and satisfying nourishment. If nutritional needs are well met, freedom from physical and psychological distress is secured and the infant experiences pleasurable contentment. If such needs are not adequately met, states of tension in the form of hunger and anxiety develop. Under such circumstances resentment, hostility, and aggressive attempts to meet the situation become evident in the child's behavior. In a somewhat later period of development the eliminative functions assume increasing degrees of importance to the child's general feeling of well-being in accordance with the freedom with which they can be expressed. When the pleasure of immediate and unrestricted gratification is curtailed by necessary efforts to aid the infant in acquiring voluntary sphincter control, resentment and antagonistic responses tend to appear. A similar course of events is noted when, in a still later period, attempts are made to eliminate the free expression of early pleasurable sexual drives. Insofar as the gratification of all forms of instinctual behavior is associated with a pleasurable feeling-tone for the infant, these phases of developmental

conditioning to his external environment conflict with his search for comfort and pleasure.

It is not merely in the presence of these normal instinctual urges which make possible self-preservation and later self-propagation, that the psychoanalyst finds the sources of psychological illness. It is in the persistence in the *unconscious* of abnormal degrees of infantile fear, aggression and pleasure associated with the later expression of normal instincts that psychological illness arises. It should be borne in mind that in the early period of life the infant or child lives with a complete lack of knowledge of conventional standards and consequently experiences no feeling of guilt when adult standards of acceptable behavior are transgressed. All of his behavior, therefore, is measurable for him purely in terms of producing feelings of pleasure or displeasure. During this period the infant strives in every way to eliminate or escape from whatever brings him discomfort, physical or mental. In so doing he again manifests a complete disregard of conventional requirements and experiences no guilt, shame, or unhappiness if adult standards are violated. Under these circumstances there develops during this period of the child's development strong drives to repeat again and again whatever brings pleasure, and avoid to the greatest degree possible whatever displeases him in any way. If the infant is to mature biologically and psychologically into a contented and socialized member of a group, it becomes obvious that these trends toward complete and immediate self-gratification and the total avoidance of all displeasures by any measures at hand must be modified. These infantile forms of reaction to his environment must be relinquished or altered to become compatible with the wishes and welfare of those with whom he must live. Under normal circumstances these necessary modifications take place gradually during late infancy and childhood. During this same period his emotional responses to his varying experiences are most sensitive and intense. Of great importance is the fact that during this same period of enforced modification of his instinctual demands his most rapid biological and psychological development is simultaneously taking place. As a result of these parallel phases of biological and psychological development the processes become closely entwined in the experiences related to nursing, weaning, the acquisition of sphincter control and early forms of sexual activity.

During these critical years the child is completely dependent upon those about him, in particular, the mother, for life, comfort, affection, and all pleasurable experiences which he may derive from them. It is, however, these same individuals who must gradually deprive the child of many of his early pleasures. In so doing they must create at times actual physical pain or, at best, discomfort, displeasure, and consequent fear and resentment in the child. This is particularly true during the weaning process, the attempts to establish volitional sphincter control, the curbing of early sexual pleasures, and attempts to inculcate into the child a sense of moral values and respect for authority. All of these necessary preparations make many restrictions upon the free expression of the child's own wishes and consequently can be accepted by him only under duress and with reluctance and manifest or concealed disappointment and resentment. Under these circumstances the child finds in the same person an affectionate, pleasure-giving individual at one time and a punishing, pleasure-depriving one at another. The child in this stage of development is, of course, quite unable to understand the reasons for the variability of the behavior of others toward him. In response to these widely differing attitudes which others direct toward him, the child soon develops rapidly changing feelings toward them. When vexed or worried by objects or persons about him, his instinctual urge is to attack and destroy the sources of his displeasure or to withdraw himself from the reach of them. In these early years of life, however, the child is completely dependent for life and happiness upon the parents or their substitutes. He is placed in the situation of instinctively wishing to attack or escape from the same individuals upon whom he must depend for biological and psychological security. If he attacks them, though only in his thoughts, he fears that in retaliation they may harm him or leave him. If, on the other hand, he could flee from them he would be left alone, helpless, and in even greater danger.

There are several ways in which the child's conflicts between his instinctual demands and the requirements of his environment can be adjusted. We shall mention here only two of them. The first takes place spontaneously for the child by a rapid or gradual exclusion from his conscious mind of the strong feelings of disappointment and resentment and the memory of the event which produced them.

Both components of the traumatic experience, the memory of the event and the unpleasant feelings aroused by it, are submerged to levels of mental functioning whereat they can no longer be remembered or felt in the realm of consciousness. This phenomenon is referred to as repression. From this method of adjusting conflicts, repeated again and again during the early years of life, a great portion of the unconscious mind is constructed.

A second way in which the child is enabled to solve important conflicts is by the release of some of his hostility toward individuals upon whom he is not so dependent for security. A little boy may attack and destroy in his play imaginary Indians, dissipating in that direction some of the aggression originally called forth by the father. The little girl may give vent to her feelings of angriness with her mother by spanking her doll, much as she herself is occasionally spanked by the mother. In later years, competitive sports provide for the partial drainage of aggression directed toward opponents who substitute for the parents or siblings toward whom the child has aggressive feelings. Such conversions of primitive, instinctual, antisocial drives, which tend to be entirely destructive, into constructive and socialized outlets are referred to as sublimations.

Psychoanalytic theory teaches and clinical experience constantly confirms the fact that these defences erected against persistence in consciousness of childhood conflicts are not necessarily permanent. Repression and sublimation frequently break down in later life under newly imposed conditions of stress and strain, and permit re-emergence of the energies not fully discharged in the child's adjustment to early life conflict. These latent energies, as they find release in behavior related to new situations, present themselves in the forms of abnormal adjustment called neuroses or psychoses. It is not difficult to understand how sublimations, in which some discharge of the forbidden urges is normally permitted, may fail completely with the production of grossly abnormal behavior. To understand what happens in the failure of repression, however, some further consideration is necessary of the conditions under which unconscious material is kept repressed.

Whenever a conflict has been eliminated from consciousness by submergence into the unconscious, the strong feeling-tones associated with it are not thereby destroyed. They remain bound to the memory of the event which produced them and continue to be active in the unconscious mind. It will be recalled that the free expression of the forbidden wishes or behavior would have brought pleasure at one time to the child, and that the nature of man is such that he always strives to reproduce over and over behavior which brings him gratification. This pleasure-component which accompanies the excluded wishes leads the repressed drives to seek constantly to return through the conscious mind to find expression in actual behavior. Normally they are held in check in the unconscious by opposing forces, known as resistances, exerted upon them from the conscious mind. There exists then a constant struggle within the mental organization of the individual between the opposing pressure of repressed drives seeking outlets in behavior, and resistances against their expression brought to bear upon them by the conscious mind. It is obvious that these resistances must be maintained at all times and in adequate strength if the individual is to make a comfortable and acceptable adjustment to his environment. When prohibited urges to action approach too closely to the level of becoming conscious to the individual he begins to experience anxiety. In terms of the existence of an unconscious mind, anxiety thus becomes a danger signal, warning the conscious mind of the threatened return of old memories and strong feelings which have had to be repressed. In many instances the threatened return of unconscious mental content is spontaneously brought under control with readjustment of the psychic structure and no formal medical treatment becomes necessary. Under less fortunate circumstances, however, the repressed forces cannot be held in check by resistances and find their outlets in the signs and symptoms of a neurosis or psychosis.

To summarize, then, in terms of psychoanalytic theory a neurosis represents an only partially successful attempt to heal a psychological lesion; — a conflict between man's unconscious and conscious desires. The original conflicts from which the later neurosis draws its energy are established in the individual by the highly charged emotional experiences of infancy and early childhood. These early experiences and the intense emotions connected with them have become excluded from the conscious knowledge and memory of the patient in order to preserve his health and happiness. The energies associated with the original conflicts, how-

ever, remain latent in the unconscious and constantly seek to achieve conscious recognition and expression in behavior. In this attempt to return to the conscious level of the individual's mind they are opposed by counter-forces set up within the conscious mind itself, or resistances. If in the course of later life, however, too great stresses and strains are imposed upon the psychological structure of the individual, the defenses which have been erected against the return of repressed mental content may break down and permit release of the latent forces in forms of compromise behavior which we clinically recognize as neuroses. With an even more complete failure of conflict adjustment the profound changes of a frank psychosis may make their appearance. Insofar as the signs and symptoms of a neurosis are made up in part of conscious desires of the individual to preserve happiness and health and are only partially satisfied in the compromise made with unconscious wishes, his neurosis becomes undesirable and disturbing to him. On the other hand, since these same compromise-formations, or symptoms, partially gratify unconscious wishes associated with pleasure, they tend to be perpetuated in spite of the patient's conscious wish to be free of them.

If this concept of the etiology of neuroses is accepted, the treatment of neurotic illness may be approached from at least two different angles. One form of treatment would have as its aim removal of the signs and symptoms by diverting their energies into the production of normal forms of behavior or else to drive back into repression again the liberated unconscious forces. All forms of psychotherapy except psychoanalysis employ one or another modification of this type of treatment. It is important to note that with these forms of treatment the actual source of the difficulty, the basic conflict or psychological lesion, is not altered as such but remains within the psychic structure with the potentiality to produce illness again. The second mode of treatment, employed only in psychoanalytic therapy, endeavors to enable the patient to become conscious again of the basic conflicts and to liberate their emotional forces by reliving them in a new situation thus eliminating the need for their abnormal expression in the form of a neurosis. To the extent to which this can be accomplished, the actual sources of the neurosis will have been removed from the mental organization of the individual and the possibility of neurotic illnesses arising from them will be obviated in the future.

It becomes apparent that if such basic conflicts are to be removed in treatment, some method of enabling the patient to become aware once more of his unconscious mental content becomes a basic necessity. Such a method was sought and found by Freud, and made possible the development of the psychoanalytic treatment of neuroses.

During the middle period of life after having attained an enviable reputation on the basis of his neurological investigations and his discovery of the use of cocaine as an anesthetic in ophthalmological treatment, Freud's interest began to center exclusively about the study of functional mental disorders. While observing Breuer working with hysterical patients in the hypnotic state, he observed that memories of events of which the patient knew nothing in his normal waking state were recalled with the release of great emotion. He also observed that with the recall of these forgotten events and the discharge of their associated feeling-tones the patient's hysterical manifestations disappeared. Such relief was only transitory, however, and upon removal from the hypnotic state the patient's hysterical symptoms returned and the memories and feeling-tones expressed during hypnosis were again completely forgotten by the patient. Freud realized that if such patients could regain these forgotten memories and emotions while they remained in a normal waking state, such experiences would be constantly available for use by the physician in the treatment of the symptoms which they appeared to be producing. In an effort to enable the patient to recall and express to the physician such unconscious mental content while fully conscious, Freud requested his patients to express with the utmost freedom *all* of their thoughts and feelings as they entered the mind without restraint or alteration of any kind. This process of introspection called free association, when persisted in for short periods daily over months at a time, proved effective, and Freud's patients gradually became able to regain the memory of forgotten situations of great emotional significance which had occurred in infancy and early childhood. The skilled use of this method of free association became the most efficient means available of exploring the unconscious mind of an individual, and consequently its use became one of the basic techniques in psychoanalytic therapy.

We have mentioned previously the forces of resistance which constantly oppose the return to the mind of unconscious mental content. In the treatment situation during attempts at free association on the part of the patient these resistances continue to act. The conscious mind is reluctant to have the barriers against the intrusion of distressing unconscious content lowered. Such a lowering always occurs, however, when the patient tries to permit all that will to flow freely into his conscious mind during this process of free association. This is particularly true in the early weeks of treatment and becomes a complicating factor, but it diminishes as therapy is continued. This diminution occurs because of the existence of conscious desires on the part of the patient to become well. This desire aids him to become conditioned slowly to frequent periods of free association and so to continue in treatment. As the patient becomes able to express more freely his most intimate conscious thoughts and feelings a new relationship develops in his mind toward the physician. This psychological phenomenon is known as the transference and the development and use of this transference in treatment distinguishes psychoanalysis from all other forms of psychotherapeutic treatment. The physician comes to be regarded by the patient more and more in terms of wishes and feelings toward him as contrasted with the physician's attitude and treatment as they actually are. The patient develops progressively greater degrees of this emotional distortion of the physician and treatment, and becomes increasingly more dependent upon them. As a result he releases upon the physician from time to time intense feelings of hatred, affection, jealousy, suspiciousness, and so on as they develop about events which occur during the analytic hours and his other daily activities. He eventually comes to place the physician in very unreal roles and reacts to him with inappropriate emotions. By this time in the transference situation, the physician is reacted to with the same feelings as were the individuals actually present in forgotten emotional situations of infancy and early childhood. He treats the physician now as he once desired to or did treat, perhaps, the actual father or mother in early life. He was once actually in a dependent role with conflicting feelings toward these real individuals of his childhood. He now finds himself again in a dependent role upon the physician in his attempt to become well. As a result he re-experiences the frustrations, disappointments, aggressions, guilt, and insecurity that he once before knew but which were banished, because of their intensity, to the realm of the unconscious mind.

In the treatment situation with the physician, however, he is now met with an essentially neutral attitude as contrasted with the attitude of the real individuals in childhood. He receives from his analyst neither direct reward nor punishment, real evidences of affection or antipathy. In this situation he relives the old incompletely discharged emotional intensities of early life experiences. He comes to learn slowly that such wishes and feelings do not possess the dangerousness that they had appeared to have in childhood and for which they had to be repressed. Gradually, with the aid of the physician he recognizes the unreal role in which he has placed the latter and the meaning of his intense emotional attitudes toward him. With the realization of these facts on the conscious level, the way becomes clear for the patient to restore the physician to his true professional status in the treatment-relationship and the analysis approaches an end.

Insofar as the patient becomes consciously aware of the deeper meaning of his neurotic symptoms during his analysis, the need for such compromise outlets becomes constantly decreased and they are eventually dispensed with entirely. The unconscious, as well as the conscious components of his conflict have become known to him and subject to his conscious direction. Above and beyond alleviation of his neurosis, the patient has acquired during analytic treatment a deeper and broader understanding of himself and of many other inadequate modes of reaction which he had previously employed in the attempt to master ordinary problems of living. The psychoanalysis thus continues to have a beneficial influence extending far beyond its termination in facilitating the ability of the patient to live comfortably within himself and with others.

Thus far we have confined our discussion largely to some of the fundamental principles of psychoanalytic theory and practice from an academic viewpoint. Some aspects of their practical use remain to be considered as we close our discussion of them.

The number of mental disorders amenable to psychoanalytic treatment is limited and its use is

almost exclusively confined to the treatment of the more common forms of neuroses: anxiety states, hysterias, psychasthenias. For many of these forms of neurosis psychoanalysis constitutes the treatment of choice and its therapeutic results are superior to those of other forms of psychotherapy. In more recent years attempts have been made to apply psychoanalysis in modified form to the treatment of actual psychoses, but its therapeutic value in acute mental disease is still dubious. Even more recently increasingly productive correlations between the inter-action of deeply laid psychological processes and gross biological manifestations of patients have been made possible by combining psychoanalytic concepts and techniques with clinical laboratory investigations. It is in this study of the psychosomatic inter-relationships in disease that psychoanalysis may be destined to make its greatest contribution to medicine in the future.

Even within its limited field of applicability to the neuroses alone, psychoanalysis suffers from other restrictions arising from some of its own technical aspects. The treatment of a neurosis by therapeutic psychoanalysis involves the expenditure of a great deal of time, often considerable expense, and an ability on the part of the patient to tolerate certain deprivations, and releases of anxiety which occur during the treatment. The average analytic course of treatment requires sessions with the physician for an hour a day, usually five days a week, over a period of a year or more. The cost to the patient of such numerous sessions naturally restricts the number who are able to undertake treatment. As in all medical specialties, the physician practicing psychoanalysis endeavors to adjust fees with regard to the patient's economic status and devotes some of his time gratis. It is obvious, however, that because of the time involved the number of patients which he may carry at reduced fees with economic safety must be relatively small. In contrast to the general practitioner or the specialist in other fields who may be able to see four or five patients in an hour, the psychoanalist can treat but one. Still other factors which tend to reduce the number of neurotic individuals who can receive psychoanalytic treatment are their exclusion on the basis of age, the lack of a fundamental desire to recover, or too close approximation to a frank psychosis.

Another great limitation to the practical application of psychoanalysis has its origin in the relatively few adequately trained psychoanalysts who are available to treat the vast number of neurotics who need help. This discrepancy between demand and supply comes about as a result of the long training and experience which a physician must undertake in order to be officially recognized as qualified to conduct therapeutic psychoanalyses. There are, of course, many unqualified individuals who profess to treat illness by methods which are loosely referred to as psychoanalysis. Far too often genuine psychoanalysis is unjustly condemned for treatment failures resulting from quack forms of pseudoanalysis which bear no resemblance to orthodox psychoanalysis and which are conducted by inadequately prepared individuals. The requirements of the American Psychoanalytic Association, which must be met by a physician desiring certification to conduct therapeutic psychoanalyses, approximates five years of post-graduate training and experience. A yearly bulletin is issued by the Association in which may be found a list of physicians who have received approval as qualified to carry on therapeutic analyses. The length of time and expense involved in such preparation necessarily reduces the number of physicians qualified to do analytic treatment to a very small number proportionate to the total practitioners of medicine or indeed to any other medical specialty.

Despite the handicaps imposed upon therapeutic psychoanalysis from within and from without, it has however, continued to make valuable contributions to the understanding and treatment of illness for almost fifty years. Its theories and techniques in modified forms are so deeply imbedded in modern medicine that they cannot avoid participation in the future growth of medical art and science. Psychoanalysis has survived its own infancy and has passed through most of its childhood conflicts. It has remained healthy enough to have survived the debilitating influences of its own overprotective enthusiasts and its rejection by those who would have utterly abandoned it. Insofar as one may glimpse its future, it now seems assured of reaching a full maturity and the capacity to live in increasing harmony within the environment of medicine.

TOXEMIA OF PREGNANCY

A STUDY OF 273 CASES

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Figures published by the American Medical Association show that for a number of years the Providence Lying-In Hospital has ranked either sixth or seventh in the United States in obstetrical turn-over. This is not a teaching hospital in a medical center. We have no salaried staff members, and we lack extensive and expensive laboratory facilities.

We are conscious of our obligation to utilize this mass of material for study purposes. Many of our house officers and many more of our affiliated medical students are going out to do obstetrics in smaller communities. Thus, because of our internal organization and because of our graduating personnel, we feel that any contribution we make to the field of obstetrics must be along practical, clinical lines which may be of some service to the bedside obstetrician.

In the fall of 1937, a Toxemia Clinic was organized with representation from the medical, eye, urological, and obstetrical services. The object was to study and to follow as long as possible the postpartum cases referred from the wards; as time goes on, we are also acquiring some unofficial antenatal function. We are today reporting the cases we have accumulated in the past three and a half years.

We have not followed enough cases to be prepared to make any dogmatic statements as to the postnatal life of these patients. At present we are trying to crystalize our ideas concerning the prenatal clinical course of toxemia.

We attempt to classify all cases by the now generally accepted American Committee standards. Each case is abstracted on a form containing all information we propose to use in study. Dates are figured in weeks. Clinic visits, house admissions, and delivery are detailed, together with eye examination and laboratory data. Each pregnancy is reviewed and if toxic is abstracted. As far as possible each pregnancy is classified on its own merits. In doubtful instances previous or subsequent pregnancies are given due weight if the choice of classification lies between Group A and Group B. Subsequent pregnancies are abstracted as they occur and are added to the folder. This toxemia abstract folder is kept in a separate file.

Since the Benign Hypertensive and Preeclamptic groups form the bulk of the material which floats through clinic or office, our chief interest is centered here. These milder cases are less dramatic but in the long run are more important. We feel that familiarity with them and with the distinctions between them are of the utmost practical value in terms of diagnosis, prognosis, utilization of hospital bed space, and one's own peace of mind. This should be particularly true in the case of the obstetrician with limited laboratory and hospital facilities.

In the past three and a half years, we have had about 11,150 deliveries; in this time there have been 520 cases of toxemia of pregnancy, a hospital incidence of 4.6%. In the same time interval, we have seen 273 cases in the follow-up clinic, 52% of the toxic group. Remaining 48% are private cases or patients who do not return to the clinic. The series here reported comprises 2.4% of our entire hospital turn-over.

We have classified these as to previous, present, and subsequent pregnancies. (Chart 1.)

SUMMARY OF SERIES

CHART 1

	Prim.	Mult.	Total	Prev. Preg. Study	Subs. Preg. Norm.	Subs. Preg. Toxic	In Clin. Norm.	In Clin. Toxic	Total
Benign Hypert. (Mild)	6	15	21	14		(?)1		1	16
Benign Hypert. (Severe)	1	10	11	25		2		2	29
Malig. Hypert.		5	5	4					4
Glomeruloneph.	6	3	9	6		1		1	8
Pyeloneph.	7	19	26	27		4		1	32
Unclassified	23	33	56	27	1	3			31
Pre. (mild)	36	36	72	54	6	6	2		68
Pre. (severe)	29	28	57	41	7	3	1	1	53
Eclampsia	9	7	16	4	1	2			7
Total Cases in Series			273						
Previous Pregnancies Studied				202					
Subsequent Pregnancies Studied								46	
Total all pregnancies studied in these 273 patients									521

From the Toxemia Clinic of the Providence Lying-In Hospital.
Read before the New England Obstetrical and Gynecological Society, May 14, 1941.

Classification

The relative incidence of the sub-groups in the classification is given below. It is noted that this does not agree with most published figures. The reason for this is the fact that these are follow-up patients who come or fail to come at will. The figures can not be expected to coincide with a study of a total hospital admission group.

GROUP A.

HYPERTENSION

1. *Benign Hypertension (mild)* 7.7%
   This group includes the older multiparae who attend clinic poorly.
2. *Benign Hypertension (severe)* 4.0%
   This is relatively too large in comparison to the mild. It probably includes some cases of mild hypertension with superimposed preeclampsia. Any hypertensive who shows a pressure of 160/110 is classed as severe, even though we may suspect it is mild with added preeclampsia.
3. *Malignant Hypertension* 1.8%

NEPHRITIS

1. *Pyelonephritis* 9.6%
2. *Glomerulonephritis* 3.3%

UNCLASSIFIED 20.5%

This is a large group for two reasons: (1) We are as rigid as possible in making a definite classification. (2) This group includes all late comers and emergencies.

GROUP B.

1. *Preeclampsia (mild)* 26.4%
   Probably the bulk of the unclassified also belong here.
2. *Preeclampsia (severe)* 20.6%
   This is too large in proportion to the mild for two possible reasons: (1) It may include some patients with mild hypertension and superimposed preeclampsia, in whom we first caught the patient in the midterm pressure slump and failed to recognize the basic hypertension. (2) We get a better return rate on these sick patients than on more mildly ill cases.
3. *Eclampsia* 5.9%
   These are the only easy cases for classification as the convulsions make the diagnosis. They are also the group about whom we know the least.

OPERATIVE INCIDENCE

The gross operative incidence of 21.9% includes 9 cesarean sections for all causes. In this connection, it is of interest to note that in the past five years we have done 49 sections on toxic patients for all causes, without a fatality. In this series, of 14 separated placentae in past and present pregnancies, only four were sectioned.

FETAL MORTALITY

The gross fetal mortality was 20.5%. This figure may be broken down into:

Group A.	25.0%
Unclassified	28.6%
Group B.	15.1%

INDUCTION OF LABOR

That medical induction is not a reliable procedure, may be seen from the poor results obtained in this series. This is particularly true where labor is attempted early in the last trimester:

Unsuccessful medical inductions	80
Successful inductions	49
Artificial rupture of membranes	41

In the field of toxemia we are dealing with three distinct disease entities, hypertension, nephritis, and true toxemia of pregnancy. Of these, hypertension and preeclampsia may run concurrently.

Benign Hypertension

There were 21 mild hypertensives, six primiparae and 15 multiparae. One quarter of these were under 25 years of age. The 15 multiparae had had a total of 74 previous pregnancies, of which 14 were in this hospital and eight known to be toxic. Of these previous toxic pregnancies, all that could be classified were mild hypertension; none had shown definite preeclampsia. There have been two subsequent pregnancies. One was mild hypertension; the other, paradoxically, is at present normal in the prenatal clinic. Seventeen had normal deliveries. There was an extraction of twins, version and extraction of hydrocephalus, high forceps for android pelvis, and section for central placenta previa. This is a gross operative incidence of 19.0%.

The gross fetal mortality was 9.5%, consisting of the stillborn hydrocephalic and a macerated fetus. It would be expected that the fetal mortality attributable to toxemia should be higher.

A composite graph made of all these patients, on which all pressures, urines, and weight gain are plotted, should give a fair average picture of the clinical course of mild hypertension. Such a chart (Chart 2) shows that the patient enters the clinic with a pressure in the 140-160 range. This is maintained until about the nineteenth week, when a drop to an appreciably lower level occurs for a few weeks. This drop is of considerable clinical significance in classifying these patients. Any patient entering the clinic for the first time in the 19-24 week period, who later exhibits a rise of pressure

over 140, may be a hypertensive who was first seen in the midterm drop.

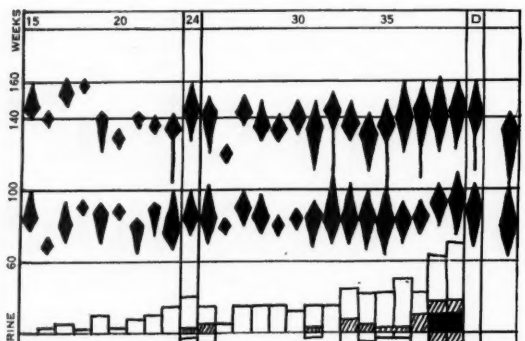
Reasonably reliable criteria are available in the majority of cases if the course of the late pregnancy is studied. The eventual pressure rise, when it occurs, is usually earlier (24-27 weeks) than in preeclampsia. Furthermore, this rise continues as a fairly level plateau rather than as a continually climbing curve; it is not much accentuated at delivery; and it falls back not much below the 140 level after delivery. This is not the picture of the pressure curve in preeclampsia.

In addition, other data assist in differentiating mild hypertension from preeclampsia. The urines are almost consistently negative in the face of the high pressure until after the thirtieth week. From this point, there are a relatively small number of abnormal urines; in the cases where albuminuria does occur, sediment findings are rare. This is in contrast to the urine picture in preeclampsia.

CHART 2

MILD BENIGN HYPERTENSION

Composite of the prenatal records of 20 cases.



Diamonds represent B.P., plotting all pressures taken. High and low points cover extreme pressure range, greatest width at mean level. URINE: Above line, clear—normal; shaded 1 plus; black 2 plus. Below the line, relative number showing casts or RBC are shaded into total albuminuria. WEIGHT: Each square equals one pound per patient per week gain.

COMMENT 1. High initial pressure level, with midterm drop about 19-23 weeks, followed by rise in last trimester. Generally steady level. Little rise at labor; little fall at discharge.

COMMENT 2. Relatively little albumin. Rare casts or RBC.

COMMENT 3. Steady weight gain level, with little rise at term. Figures from 38 week not included, as some of the obese patients were reduced by catharsis, giving net loss for group.

The average weekly weight gain is steady throughout pregnancy, and seldom exceeds a pound a week. We do not often see the sudden terminal weight gain from edema that the preeclamptics show.

In addition to these findings, the state of the retinal vessels is of great assistance in some of the puzzling cases. Arteriolar changes early in pregnancy would point to the inference that the patient has inherent vascular disease, not true toxemia. The ophthalmoscope is very definitely a working tool of the obstetrician.

If one has a visual picture of this type of clinical course, he has something which is of prognostic as well as diagnostic value. We used to see many patients admitted near term because they were running a pressure of 140-160. Study of their pressures while hospitalized demonstrates that there is no significant fall in levels, or any other clinical improvement which would make occupancy of a hospital bed worth while.

It is to be understood that I do not refer to the type of mildly hypertensive case who is admitted because of increasing pressure. A sudden rise in a previously unexciting, moderately high plateau, especially if accompanied by sudden weight gain of more than a pound a week, or by urinary findings, is a striking variation from the average picture; it may indicate that preeclampsia has become superimposed. In general, mild hypertension can be regarded calmly but not complacently.

Severe Benign Hypertension

This group probably includes some cases who should really be considered as mild hypertension with superimposed preeclampsia.

Mild Preeclampsia

We had 72 mild preeclamptics, evenly divided between primiparae and multiparae. The latter had a total of 129 previous pregnancies, of which 54 were in this hospital. Among these there were only ten known toxic pregnancies in nine patients. Four were definitely severe preeclampsia; two were mild preeclampsia; and the remaining four are unclassified. Since all these patients were carefully questioned concerning previous toxemia, as far as we know the previous toxemia incidence was 7.8%. However, as the incidence among pregnancies occurring in this hospital was 18.5%, the truth probably lies somewhere between these figures.

CHART 3

MILD PREECLAMPSIA

	Primip.	Multip.	Total
AGE INCIDENCE			
Under 20	4	0	4
20-24	18	4	22
25-29	12	11	23
30-34	1	8	9
35 plus	1	13	14
	36	36	72
PREVIOUS PREGNANCIES			
Previous Total		129	
Previous P. L. I. H.		54	
Known Toxic		10	
SUBSEQUENT PREGNANCIES		See Chart 1.	
ONSET of LABOR			
Spontaneous	26	25	51
Unsuccessful medical	8	11	19
Successful medical	8	5	13
Art. rupture memb.	1	3	4
Elective section	1	0	1
OPERATIVE INCIDENCE	33.3%	13.9%	23.6%
FETAL MORTALITY			
Gross	11.1%	16.6%	13.9%
Corrected	2.8%	5.5%	4.2%

It is generally stated that preeclampsia is a disease of young women. In breaking down into five year age groups, it is seen (Chart 3) that the shift is toward the younger women among the primparae, and toward the older among the multiparae. 30.9% of these women were from 30-44 years of age. The logical question is whether the diagnosis of preeclampsia is correct in these older cases. After scrutiny of the past, present, and subsequent pregnancies of these twenty-five women, it would appear that three might be doubtful. In thirteen the evidence is more than adequate. In the remaining seven, although previous pregnancy records are shady, the evidence of the present pregnancy and follow-up seems to justify the diagnosis.

There have been fourteen subsequent pregnancies in twelve patients. Four have had single normals; one two normals; two are in the prenatal clinic, again normal; five patients have had six toxic pregnancies. There have been one mild preeclampsia; two severe preeclampsias, a severe preeclampsia followed by pyelonephritis, and a toxic mole. Thus to date, a little better than half of the patients who became pregnant following mild preeclampsia were normal. Where toxemia ensued, it was of a more severe grade in most cases; only one patient swung across the line from Group B to Group A classification.

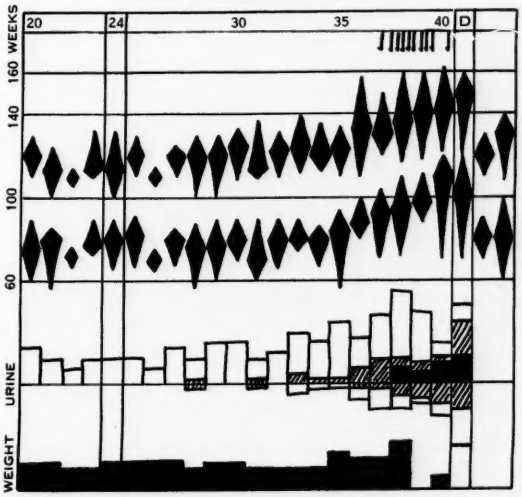
In twenty cases labor was induced because of the toxemia. Fifty-five cases delivered normally. This makes a gross operative incidence of 23.6%; it was 33.3% among the primiparae. The figure appears high, but it includes three sections not connected with the toxemia, two monstrosities, one bagging for previa, and one breech. The remaining ten forceps delivery of these sick patients seems reasonable enough.

The gross fetal mortality was 13.9%, including a monster, a meningocele, congenital heart disease, and the stillborn from bagging. In only two macerated and one stillborn could the mortality be attributed to the toxemia, 4.2% of all births.

CHART 4

MILD PREECLAMPSIA

Composite prenatal chart of 25 cases.



Arrows at upper right corner indicate patients admitted to hospital for treatment.

COMMENT 1. Sharp rise in systolic and diastolic pressure after 36 week.

COMMENT 2. Increasing upswing of abnormal urines.

COMMENT 3. Increase in average weight gain 35-38 weeks. Net loss in weight 39-40 weeks, due to dehydration therapy in treated cases.

The clinical course of mild preeclampsia (Chart 4) differs in several essentials from that of hypertension. The pressure runs along normal into the last trimester; on the average there is no significant warning rise in diastolic. Only twelve cases exhibited any abnormal rise before the thirty-sixth week. From this point, however, there is a gradual but definite rise of the general curve. Peak readings approach the 160 level by the thirty-eighth week; but there is an even more marked tendency of the weekly mean levels to climb progressively to

just over 140. After delivery there is a sharp fall back to normal levels. There were two cases of post-partum preeclampsia.

As contrasted with benign hypertension, the urinary findings follow the climb of the pressure. Occasional albuminuria appears after 30 weeks; but from the thirty-sixth week there is a sharp increase in the proportion of albuminuria and a very definite increase in the relative proportions of specimens with casts and red blood cells.

There is also an appreciable stepping up of the weight gain curve, which shows an average of 1.5 to 2 pounds per week after the thirty-sixth week. This seems to lag a little behind the appearance of albuminuria, but precedes the significant pressure rise.

A study of the composite chart of patients admitted to the hospital for prenatal treatment brings out an interesting point. The mean pressure curve begins to fall in three or four days, although there is not a corresponding improvement in the urinary picture. It would appear that to admit the average mild preeclamptic and then to induce labor in 3-4 days is not rational.

If the patient is allowed to rest for about a week, the pressure curve in the usual case has returned to normal; there is slight improvement in albuminuria and relatively fewer casts. The patient is now at the optimal point for induction. The slight lift in pressure level at labor is not alarming in any case.

This clinical picture does not give a feeling of security to the obstetrician, but variations from it in an upward direction become more significant as will be brought out in the discussion of severe preeclampsia. The point about antepartum hospitalization allows for more intelligent planning in relation to the expected date of term, and it acts as a counterbalance against one's instinct to hurry onset of labor.

Severe Preeclampsia

There were 57 severe preeclamptics, evenly divided between multiparae and primiparae. There was a total of 107 previous pregnancies in this group. Of the 41 which occurred in this hopsital, ten patients contributed fourteen known toxic episodes. There were three single mild preeclampsias, three single severe preeclampsias, one sequence of normal-severe-normal-mild, one sequence of normal-mild—four normal-unclassified, one with two unclassified toxemias in five pregnancies. The tenth case had two unknown deliveries followed by mild preeclampsia; at her fourth pregnancy she was classified as mild hypertension; but at the present appearance all the data on the record point to a diagnosis of severe preeclampsia. (Chart 5.)

CHART 5
SEVERE PREECLAMPSIA

	Primip.	Multip.	Total
AGE INCIDENCE			
Under 20	5	0	5
20-24	10	3	13
25-29	10	5	15
30-34	3	8	11
35 plus	1	12	13
	29	28	57
PREVIOUS PREGNANCIES			
Previous Total		107	
Previous P. L. I. H.		41	
Previous Toxic		14	
SUBSEQUENT PREGNANCIES		See Chart 1	
ONSET of LABOR			
Spontaneous	13	14	27
Unsuccessful medical	13	8	21
Successful medical	6	6	12
Art. rupture memb.	5	8	13
OPERATIVE INCIDENCE	34.5%	3.6%	19.3%
FETAL MORTALITY			
Gross	10.3%	8.1%	8.8%
Corrected	same	same	same

While there is little difference between the proportion of *patients* showing previous toxemia (12.5% for the mild and 17.5% for the severe), there is about double the incidence of known toxic *pregnancies* in this hospital among the severe group (34.1% as compared to 18.5% in the mild).

Ten of these women have had subsequent pregnancies. One was again severe preeclampsia; two showed mild hypertension. Of the seven normals, two are back in the prenatal clinic a second time. One is normal and one toxic, unclassified to date.

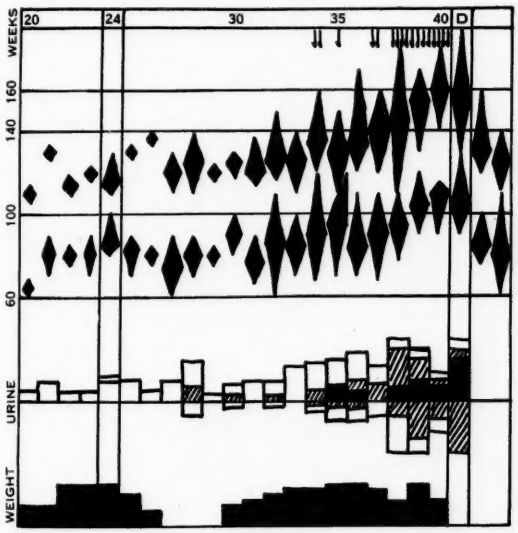
Labor was induced because of toxemia in relatively twice as many of the severe cases (52.6%) as compared with the mild class (27.8%). The operative incidence was roughly the same. The corrected fetal mortality was twice as great in the severe cases.

The clinical picture of the severe resembles that of mild preeclampsia, differing in speed and intensity of the pathological aspects. The upswing in the pressure curve and the appearance of abnormal urines begin to manifest themselves at about the thirtieth week. Whereas among the mild cases, only about a sixth were toxic by the thirty-sixth week, in the severe category fully a half were

definitely sick at this point. From the 36 week the pressure and urine pictures rise in crescendo to term, in spite of the fact that almost all cases represented in the composite chart were admitted to the hospital for treatment. (Chart 6.) Such a graph, is a de-emphasis of the true picture. The graph itself is valid enough for purposes of comparison with mild preeclampsia, except with respect to the weight curve. Here the effect of dehydration therapy on the edema throws the average figures entirely out of focus.

CHART 6

SEVERE PREECLAMPSIA



Picture similar to mild preeclampsia except in degree. Half the patients were toxic by 36 week. Systolic and diastolic pressure rise is in unison; curve is sharper and faster. Much larger proportion of abnormal urines.

Weight graph is not significant, being too distorted by changes in averages due to dehydration therapy.

Having established that the patient has no pre-existing cardio-vascular-renal disease, the obstetrician places her in Group B if and when she shows hypertension or albuminuria. The appearance of these symptoms as early as the thirtieth week or a significant rise above normal limits by the thirty-sixth week would suggest that the patient is going to be severe rather than a mild preeclamptic. This is particularly true if there is more than a minimum of urinary findings or if the weight gain is sharply on the upswing. These clinical findings are much more reliable than the subjective complaints of the patients herself, and should be viewed with apprehension. Prompt and effective treatment, followed by prompt delivery, may prevent a catastrophe. There is much evidence, both in the literature and in practical experience, to indicate that conservatism in an attempt to wait for a viable baby is more costly to the mother than the results are worth.

Eclampsia

There were sixteen eclamptics in the series. Eight of whom were emergency cases, of which we know little. There were nine primiparae and seven multiparae. The ages tend slightly to the younger women; but four were 30 years or older. The multiparae had had 20 previous pregnancies, of which five were in this hospital and one was known to be toxic. In the entire series of 273 cases, there had been nine eclampsias in previous pregnancies. Three of these cases have returned for subsequent pregnancy; one was normal, one had unclassified toxemia, one had pyelonephritis.

The first evidence of toxemia in these women was recognized as early as the seventeenth week and as late as the forty-first week. Five were clinic cases who were in the hospital for antepartum treatment; one was a clinic case who entered in labor and had the convulsion in the hospital. Of the emergency cases, one was sent in after a home delivery and had the convulsions in the hospital, the other seven were rushed in after convulsions at home. There were a total of thirty-five antepartum and eight postpartum convulsions in fifteen cases. The sixteenth case was diagnosed eclampsia without convulsion at consultation by the Neurological Service.

The gross fetal mortality was 31.3%.

Conclusions

In the past three and a half years, the Toxemia Clinic has seen 273 cases. These have been classified according to the American Committee Standard, and the incidence discussed.

Mild hypertension, mild preeclampsia, and severe preeclampsia are discussed. The study of composite graphs of typical cases in these categories give a fair picture of the course of the disease, providing a method is used which allows representation of the extreme spread of pressures as well as mean pressure levels. Study of such charts provides helpful points in making a diagnosis and prognosis of the patient's condition.

THE RHODE ISLAND MEDICAL JOURNAL
Medical Library Building
106 Francis Street, Providence, R. I.

Committee on Publication

JOHN E. DONLEY, M.D. FREDERIC V. HUSSEY, M.D.
ALFRED L. POTTER, M.D. WILLIAM P. BUFFUM, M.D.
JOHN F. KENNEY, M.D. *ex-officio*

MIDWINTER MEETING

The program for the meeting of the Rhode Island Medical Society to be held at the Medical Library Building on the evening of Monday, February 2, 1942, includes an address by Dr. Allen O. Whipple, Director of the Surgical Service of the Presbyterian Hospital in New York, Attending Surgeon at the Vanderbilt Clinic, and Valentine Mott, Professor of Surgery at the College of Physicians and Surgeons of Columbia University. Dr. Whipple will speak on the subject, "Certain Aspects of Pancreatic Disease." It is intended to invite all the physicians in Rhode Island to attend this meeting.

A CALL TO THE MEDICAL PROFESSION

The nation is at war. The Congress has passed an amendment to the Selective Service Act which will call for registration of every man up to the age of 65 and which will place all men under 45 years of age subject to service at the order of the Selective Service boards.

The Procurement and Assignment Service for Physicians, Dentists and Veterinarians was established by order of the President on October 30. Thus the medical profession itself aids in determining proper distribution of the medical profession in supplying the needs of the armed forces and maintaining medical service to civilian communities, public health agencies, industrial plants and other important needs.

At a meeting of the Procurement and Assignment Service held in Chicago at the headquarters of the American Medical Association of December 18, jointly with the Committees on Medical Preparedness of the American Medical Association, the American Dental Association and the American Veterinary Medical Association, plans were drawn for making immediately available to the United States Army and Navy Medical Corps the names of physicians who wish to be enrolled promptly in the service of the government in this emergency.

On page XIX is published a blank by which every physician may at once place his name with the Procurement and Assignment Service as one who is ready to serve the nation as the need arises. If you wish to make yourself available for classification, fill out this blank and send it at once to Dr. Sam F. Seeley, Executive Director of the Procurement and Assignment Service. When these blanks are received, they will be classified and checked with the information available in the national roster of physicians at the headquarters of the American Medical Association.

For two thousand and nine counties in the United States, lists have been prepared indicating physicians who are engaged in necessary civilian projects, public health services or educational activities from which they cannot be spared. Shortly the rest of the counties will have such lists available.

In each of the corps areas covering the United States a committee is being established, including representatives of medical, hospital, educational, dental and veterinary activities. In the individual states, committees of medical, dental and veterinarian professions are being established through which the corps area committees will exercise their functions. In each county also local committees will provide accurate information regarding the status of each member of the profession concerned.

The raising of the Selective Service age from 28 to 45 will place a great number of additional physicians in the category of those on whom the nation may call as their services are needed. Estimates indicate that some sixty thousand physicians thus

become available for service and that forty-two thousand dentists under the age of 45 also become subject to call. By enrolling with the Procurement and Assignment Service immediately, utilizing the blank on page XIX, all physicians, but particularly those under 45 years of age, insure to every extent possible assignment to the type of service for which they are best fitted. They avoid thus also the possibility of unclassified service with the United States Army during the period that may be necessary following selection by the Selective Service before the commission can be secured. A physician called by the Selective Service who has not enrolled or who is not on a reserve list obviously serves without a commission during the time that necessarily elapses before a commission is secured. In the future issues of THE JOURNAL announcements will be made regularly of the numbers of those who enroll and of the extent to which the immediate needs of the Army, Navy and other government agencies are being supplied.

Reprinted from *The Journal* A. M. A., for December 27, 1941.

Enrolment Form for Procurement and Assignment Service for Physicians on Page XIX of this number.

RECENT BOOKS

The Rhode Island Medical Society possesses some unusual advantages. It owns free from debt the Medical Library Building with a library of more than 32,000 volumes housed in fireproof stacks. It owns and publishes the RHODE ISLAND MEDICAL JOURNAL. It owns the Fiske Fund, the trustees of which from time to time offer prizes for essays which are published in the JOURNAL. On account of the Fiske Fund, the JOURNAL sends complimentary copies to a list of more than one hundred medical libraries. More than fifty journals received in exchange are donated by the MEDICAL JOURNAL to the Medical Library. The books which are reviewed in the JOURNAL are almost always presented by the reviewer to the Medical Library.

In the year 1941 an unusually large number of books were received from publishers for review in the JOURNAL. At the close of the year, although the JOURNAL had increased its number of pages by eight per cent over previous years, the book review department was sadly in arrears.

It seems fair to the publishers, who provide the Medical Library with so much of the recent literature, that the book review department should be brought somewhat up to the present, as is done in this issue of the JOURNAL.

CIVILIAN DEFENSE

The Medical Aid and Health Division of the Rhode Island Council of Defense has organized, with Dr. Joseph C. O'Connell, Director, Mr. John E. Farrell, Secretary, and an Advisory Committee which comprises the Director and Secretary, with Dr. Samuel Adelson, Miss Esther Batchelder, Dr. Alex M. Burgess, Dr. Thomas V. Daley, Dr. Murray S. Danforth, Dr. John E. Donley, Dr. Charles F. Gormly, Dr. Kalei K. Gregory, Dr. Frederic V. Hussey, Dr. John P. Jones, Dr. John E. Ruisi, Dr. Ezra A. Sharp, Dr. William S. Streker, Miss Cecelia E. Walsh, Dr. John G. Walsh, Mrs. Sara P. Weeden, Miss Louise White, and Dr. Robert F. Whitmarsh.

Following are the appointments of CITY AND TOWN DIRECTORS OF MEDICAL AID:

Barrington ..... Dr. Marden G. Platt
70 Turner Avenue, Riverside

Bristol ..... Dr. W. L. Serbst
617 Hope Street

Burrillville ..... Dr. Stephen E. Emidy
Sayles Avenue, Pascoag

Central Falls ..... Dr. Irving Farrell
428 Broad Street

Charlestown ..... Dr. Howard G. Laskey
Carolina

Coventry ..... Dr. Royal C. Hudson
1225 Main Street, West Warwick

Cranston ..... Dr. Earl A. Bowen
669 Park Avenue, Auburn

Cumberland ..... Dr. Stephen A. Kenney
258 Broad Street, Valley Falls

East Greenwich and West Greenwich ..... Dr. George Young
Main Street, East Greenwich

East Providence ..... Dr. John O'Brien
95 Taunton Avenue

Foster ..... Dr. William J. Graham
Foster

Glocester ..... Dr. Edgar S. Potter
Chepachet

Hopkinton ..... Dr. Edwin B. Gammell
Hope Valley

Jamestown ..... Dr. C. B. Ceppi
68 Narragansett Avenue

Johnston ..... Dr. Angelo Scorpio
909 Hartford Avenue

Lincoln ..... Dr. Lawrence A. Senseman
160 Chapel Street, Saylesville

Little Compton ..... Dr. Arthur W. King
Adamsville

Middletown ..... Dr. Alfred M. Taraglino
75 Pelham Street, Newport

Narragansett ..... Dr. A. T. Manganaro
95 Kingstown Road, Wakefield

Newport ..... Dr. Louis E. Burns
24 Bull Street, Newport

New Shoreham ..... Dr. Charles F. Perry
Block Island

North Kingstown ..... Dr. R. Kraemer
Wickford

North Providence ..... Dr. John P. Londergan
1901 Smith Street

North Smithfield ..... Dr. Leo Dugas
School Street, Slatersville

Pawtucket ..... Dr. Edw. H. Trainor
18 Exchange Street

Dr. Robert Henry
18 Exchange Street

Portsmouth ..... Dr. Berton W. Storrs
Portsmouth

Providence ..... Dr. Francis V. Garside
154 Francis Street

Dr. John B. Ferguson
205 Broad Street

Dr. Frank O'Connell
215 Thayer Street

Dr. Louis D. Lippitt
41 Pocasset Avenue

Dr. Lucius C. Kingman
76 Waterman Street

Dr. Edw. I. Seltzer
304 Pontiac Avenue, Cranston

Richmond and Exeter ..... Dr. Frances A. Kenyon
Woodville

Scituate ..... Dr. Louis A. Sage
Scituate

South Kingstown ..... Dr. Clifford Hathaway
38 Lake Street, Peacedale

Smithfield ..... Dr. Charles E. Hawkes
Greenville

Tiverton ..... Dr. Charles H. Bryant
Tiverton

Warren ..... Dr. Henry W. Hopkins
Warren

Warwick ..... Dr. A. W. Lupoli
Apponaug

Westerly ..... Dr. Charles P. Crandall
39 Grove Avenue

West Warwick ..... Dr. George B. Farrell
1016 Main Street, West Warwick

Woonsocket ..... Dr. Augustine W. Eddy
441 South Main Street

Each local director of medical aid is responsible for the planning of civilian protection as regards medical aid and health. This work entails the personnel of doctors, nurses, and orderlies, establishment of casualty stations and first aid posts, medical supplies and equipment, and except in the Greater Providence area contact with the nearest hospital to learn the emergency service available at that institution.

For the Providence area the directors are Dr. Michael J. Nestor, Dr. Alex M. Burgess and Mr. Edward F. Carey. Dr. Joseph C. O'Connell is Director of the Medical Division of the Defense Council and Dr. Lucius C. Kingman, Chief Surgeon of Medical Emergency Field Units. Six field units have been established, one each at St. Joseph's Hospital, Miriam Hospital, R. I. Homeopathic Hospital, Charles V. Chapin Hospital, and two at Rhode Island Hospital. At the head of these units are Drs. F. C. Garside, L. D. Lippitt, Edward Seitzer, Francis D. O'Connell and Peter P. Chase. Each unit has four surgeons, four alternates, four graduate nurses, four nurses aids, four first-aid workers, a clerk and an ambulance driver. The American Red Cross is cooperating in providing nurses, nurse aids, first-aid workers and ambulance drivers.

PROVIDENCE MEDICAL ASSOCIATION

October Meeting

A regular meeting of the Providence Medical Association was held at the Medical Library on Monday, October 6, 1941. The meeting was called to order by President Murray S. Danforth at 8:30 P. M.

The secretary read the records of the previous meeting which were approved.

The secretary read a communication from the Acting State Administrator of the National Youth Administration which included an invitation to the members of this Association to view the training methods used in developing Rhode Island young men and women for industries essential to National Defense.

Dr. John G. Walsh, chairman of the Community Fund Committee, spoke briefly on the plans for soliciting contributions for the Community Fund by the Doctors' Committee. He concluded his remarks by introducing a resolution by which the Association would endorse the United Campaign of Community Chests. Dr. William P. Buffum moved for the adoption of the resolution. The motion was unanimously passed.

The president read a brief announcement of the proposed golf tournament and dinner to be conducted jointly on Wednesday, October 8 with the lawyers of the City.

The secretary reported that the Executive Committee wished to recommend for election as active

members of the Association the following doctors:

Morris Botvin, M.D.
Alexander M. Burgess, Jr., M.D.
John P. Hogan, M.D.
Maurice N. Kay, M.D.
Israel Mandell, M.D.

Dr. Jesse E. Mowry moved for the election of these five applicants to active membership. The motion was seconded by Dr. John G. Walsh and was unanimously passed.

The president reported the receipt by the secretary of the obituary tribute to the late Dr. Edward E. Pierce which had been prepared by Dr. John E. Donley and Dr. Jesse E. Mowry. This obituary has been placed on permanent file with the Association.

The president announced the appointment of Dr. N. Darrell Harvey and Dr. Edwin G. Thompson to prepare the obituary of the late Dr. O. Fletcher Best.

The president introduced Dr. Harold G. Calder to serve as chairman for a panel discussion on the subject "VITAMINS" which was discussed as follows:

VITAMIN A ..... Frank J. Jacobson, M.D.
VITAMIN B ..... William P. Buffum, M.D.
VITAMIN C ..... Banice Feinberg, M.D.
VITAMIN D ..... Harold G. Calder, M.D.
VITAMIN K ..... Reuben C. Bates, M.D.

Following the original presentations, the speaker on each vitamin was cross-examined by other members of the panel. This was followed by questions from the audience.

Some of the points presented were these:

Vitamin A is stored in the liver and is essential for the integrity of epithelial tissues. Significant deficiency occurs almost only with abnormalities of the alimentary tract. There are no known symptoms for over-dosage.

In the present state of knowledge, the important constituents of the Vitamin B complex are thiamine, riboflavin, and nicotinic acid. White flour and sugar, which often make up a large part of the diet of those with poor eating habits, are strikingly deficient in thiamine. In treatment it is advisable to use the whole Vitamin B complex.

Vitamin C is necessary for the presence of normal connective tissue and the integrity of capillary walls. This vitamin is sensitive to oxidation, particularly in the presence of alkali.

Vitamin D is stored in the liver and is essential for the normal growth bones and development of teeth. It should be started early in life and a daily intake of 800 to 1200 units is desirable.

Vitamin K is necessary for the production of prothrombin in the blood, which in turn is essential for normal blood clotting. Vitamin K is particularly valuable in the jaundiced patient and is hemorrhagic disease of the New-Born.

Discussion was provided by Doctors Raymond, Louis Goodman, P. P. Chase, and Walter Wagner.

The meeting adjourned at 10:30 P. M.

Respectfully submitted,

FRANK B. CUTTS, M.D.,
Secretary.

November Meeting

A regular meeting of the Providence Medical Association was held at the Medical Library on Monday, November 3, 1941. The meeting was called to order by President Murray S. Danforth at 8:35 P. M.

The secretary read the records of the previous meeting which were approved.

The secretary reported on a few matters of current interest that had been discussed in the previous meeting of the Executive Committee.

The president announced the appointment of a committee to consist of Dr. Roland Hammond and Dr. Roswell Wilcox to prepare the obituary of the late Dr. John T. Farrell.

The president introduced Dr. Hugh E. Kiene, Director of Neuro-Psychiatric Department of the C. V. Chapin Hospital.

Dr. Kiene presented a paper on "Neuro-psychiatric Examination at Induction" the co-authors of which were Dr. Himon Miller of the State Induction Board and Major Arthur Hassell of the State Selective Service. Dr. Kiene pointed out that nervous and mental casualties from the last war had in the intervening years cost this country one billion dollars. He presented an outline of the methods and purposes of the neuro-psychiatric induction examination.

The president then announced the presentation of the subject "The Neuro-psychiatric Study of the Naval Recruits" which was given by Lieut. Cecil L. Wittson, (MC), USNR, Lieut. M. I. Harris, (MC), USNR, Lieut. W. A. Hunt, H. V(s), USNR, and Lieut. Philip Solomon, (MC), USNR.

The authors presented similar information regarding the neuro-psychiatric examination of naval

recruits. They pointed out the necessity of a high degree of mental health for efficiency and proper adjustment board naval vessels. Most of the recruits were young men in their teens and frequently the problems were those of late adolescence. About 36 out of 1000 recruits are discharged because of neuro-psychiatric defects. They pointed out that the information being derived from these studies promised to be of much assistance later in the examination and evaluation of similar groups in civilian life. The two papers were discussed by Drs. Walter Weigner, Ira Nichols, and Jacob Kelly.

The scientific program was concluded by Dr. James W. Sever, of Boston, Mass., who presented a paper on "COLLES' FRACTURES—A study of Pre and Post Reduction X-Rays."

In his study Dr. Sever measured the angle between a line drawn along the long axis of the radius and one parallel to the radial joint surface. He pointed out that normally the joint surface at the lower end of the radius is not at a right angle to the long axis of this bone, but is directed ten or fifteen degrees downward toward the palmar surface of the hand. A similar result should be present on post-reduction x-rays, and he clearly showed how frequently reduction was inadequate in this respect. In other words, under reduction is far more frequent than over reduction. The presentation was discussed by Drs. Hammond, Batchelder, P. P. Chase, and Danforth.

The meeting adjourned at 10:55 P. M. Attendance 110. Collation was served.

Respectfully submitted,
FRANK B. CUTTS, M.D., *Secretary.*

December Meeting

A regular meeting of the Providence Medical Association was held at the Medical Library Monday, December 1, 1941. The meeting was called to order by President Murray S. Danforth at 8:35 P.M.

In the absence of the secretary the executive secretary read the records of the previous meeting which were accepted.

The executive secretary reported for the Executive Committee and stated that at its last meeting a detailed report prepared by the Committee on Public Relations of the Association had been endorsed and approved. This report was concerned with the work of the National Physicians Committee for the Extension of Medical Services and the conclusions of the report were read to the membership. They were as follows:

"While we are aware of the fact that in some parts of the Country medicine may not be well organized and may be in need of a national bureau to assist it, over and above the facilities of the American Medical Association, yet we cannot discover such a situation in Rhode Island at the present time. We are of the opinion that the State Medical Society and its own component district medical societies are carrying forward a worthwhile program which parallels the same type of work which the National Physicians Committee advocates, and therefore we do not see any present need for a group contribution by any of our units to assist this national committee. If there are members of the Profession in the State who are of the opinion that the National Physicians Committee is deserving of their individual support they are free to give it, for surely every effort should be made to advance the cause of organized medicine both here and throughout the country. It is our belief that the best interests of the profession and of the public can be served most efficiently by efforts upon the part of our State and district societies which are close to the problems requiring study and solution. We are of the opinion that the local profession understands its own problems better than anyone else and is therefore the one best fitted to handle them."

The nominations of officers for 1942 as made by the executive committee in accordance with the by-laws of the Association were then read. This slate is as follows:

PROPOSED SLATE OF OFFICERS—1942

Recommended by the Executive Committee and herewith submitted to the membership for consideration, this slate is to be voted on at the annual meeting, January 5, 1942.

Office	Candidate Proposed
President	Henry E. Utter, M.D.
Vice President	Emery M. Porter, M.D.
Secretary	Frank B. Cutts, M.D.
Treasurer	William P. Davis, M.D.
Executive Committee (2 new members for 5-year term each)	Murray S. Danforth, M.D. Albert H. Jackvony, M.D.
Trustee to R. I. Medical Library (1 year term)	William S. Streker, M.D.

DELEGATES TO HOUSE OF DELEGATES OF
RHODE ISLAND MEDICAL SOCIETY

John A. Hayward, M.D.	Raymond F. Hacking, M.D.
Harry C. Messinger, M.D.	Murray S. Danforth, M.D.
Ernest W. Bishop, M.D.	Frank B. Cutts, M.D.
Charles L. Southey, M.D.	Ralph DiLeone, M.D.
Henry F. McCusker, M.D.	Joseph B. Webber, M.D.
James Hamilton, M.D.	Frank J. Honan, M.D.
John G. Walsh, M.D.	Clarence E. Bird, M.D.
Merle M. Potter, M. D.	Robert H. Whitmarsh, M.D.
James H. Fagan, M.D.	Joseph L. Belliotti, M.D.
Kalei K. Gregory, M.D.	George W. Waterman, M.D.
Walter S. Jones, M.D.	Samuel D. Clark, M.D.
David Freedman, M.D.	Jerome J. McCaffrey, M.D.

Frank W. Dimmitt, M.D.

The president announced that the obituary tribute of the late John T. Farrell as prepared by Doctors Roland Hammond and Roswell Wilcox had been filed with the Secretary for permanent record and that a copy is to be transferred to Dr. Farrell's family. The president then asked that Dr. Wilcox read this tribute to the membership.

The executive secretary reported that the Executive Committee recommended for election to active membership of the Association the following doctors:

Isadore Gershman
Robert S. Phillips
Jacob Reich

Dr. Jesse E. Mowry moved the election of these three applicants to active membership in the Association. The motion was seconded and unanimously passed.

The president read a special announcement relative to a required physical examination for some one hundred and fifty workers to be employed within the week and further requested that any doctors free on Wednesday of this week to conduct such physical examinations should leave his name with the Executive Secretary to be transmitted to the Rhode Island State Employment Service.

There being no report of cases nor presentation of specimens, the president called for the reading of the scientific papers and first introduced Dr. James P. Deery, Medical Director of Industrial Hygiene, R. I. State Department of Health, who presented the subject "Tuberculosis Case Finding at the Army Induction Station."

This was a very interesting discussion of the methods in the program of case finding in men inducted into the National Guard and Selective Service. Dr. Deery stressed the need for the work based on the great expense resulting from tuberculosis in the armed forces which could have been prevented by proper screening. Using 14 x 17 films and later a photo-fluoroscopic equipment supplied by the Army he and his staff examined 4905 men in all of whom only 73 men were questioned and 13 were rejected as having secondary tuberculosis, 0.31% of all examined. The cost to the State was estimated at slightly more than twenty-one thousand dollars. So far only one Rhode Islander has been hospitalized and none has been returned home or hospitalized for tuberculosis.

The paper was discussed by Doctors John Ham, Peter F. Harrington, Philip Batchelder, William P. Shields, and Joseph Corsello.

The second paper of the evening was a presentation of "Diagnosis of Bone Tumors" by Channing C. Simmons, M.D., surgeon-in-chief, Huntington Memorial Hospital, Boston, Mass.

This was a very interesting and illuminating discussion of the various types of bone tumors. The difficulties of early diagnosis were emphasized, even when biopsies are made. The speaker also stated that frequently trained pathologists are at variance in their interpretation of carefully prepared slides.

Many x-ray illustrations were shown on the screen giving early and late appearances of various tumors and bone conditions. Helpful suggestions were made in regards to diagnosis and treatment.

The paper was discussed by Doctors B. Earl Clark, Charles Campbell, Kenneth Burton, Philip Batchelder, and Murray S. Danforth.

The meeting adjourned at 10:55 P.M.
Attendance: 104, Collation was served.

Respectfully submitted,
JOHN E. FARRELL, *Executive Secretary*
In the absence of the Secretary

RECENT BOOKS

CARDIAC CLINICS, A MAYO CLINIC MONOGRAPH. By Frederick A. Willius, B.S., M.D., M.S. in Med. pp. 276, with 35 original illustrations. Cloth, $4.00, The C. V. Mosby Company, St. Louis, 1941.

Following an introductory chapter on Signs and Symptoms, many of the problems of heart disease are presented in a selected series of case histories under the headings:—Diseases of the Pericardium, Rheumatic heart disease, Bacterial endocarditis, Cardiovascular syphilis, Hypertensive heart disease, Coronary disease, Thyroid disease, Congenital heart disease, Functional states, Disturbances of cardiac rhythm. These chapters are followed

by one on Treatment and Management and by one of Historical Excerpts:—William Harvey's Epoch-Making Contribution, Marcello Malpighi's Contribution to the Knowledge of the Circulation, and Excerpts from the Life of John Baptist Morgagni. In the final chapter is a collection of Miscellaneous Topics of great interest and importance.

In the chapter on Congenital Heart Disease, Dr. T. J. Dry has written on "The Essentials in the Diagnosis of Congenital Heart Disease." He gives a clear and concise account of the embryology of the heart and a simple classification of the possible congenital diseases of the heart, "self explanatory and easily remembered."

This is a book to be read from cover to cover by the practicing physician and then to be put on his bed-side table to be read again for the pure pleasure of reading.

CHINESE LESSONS TO WESTERN MEDICINE, A CONTRIBUTION TO GEOGRAPHICAL MEDICINE FROM THE CLINICS OF PEIPING UNION MEDICAL COLLEGE. By I. Snapper, M.D. With a foreword by George R. Minot, M.D. pp. 380, with 132 original illustrations. Cloth $5.50, Interscience Publishers, Inc., 215 Fourth Avenue, New York, 1941.

Peiping Union Medical College is supported by the China Medical Board, Inc., which was originated by the Rockefeller Foundation, for promotion of medical education in the Far East. The patients in the common wards are for the most part beggars, inmates of poorhouses, and apprentices. In medical practice the state of nutrition of the patients has to be constantly considered. The poor in China live on a half or less of the minimum caloric requirement. The apprentices are given only food enough "to silence the craving of their stomachs."

Dr. Snapper's book has chapters on Nutritional Problems, Infectious Diseases, Tuberculosis, Amyloid Degeneration, Cardiovascular Diseases, Renal Affections, Diseases of the Liver, of the Blood Forming Organs, Malignant Tumors, Intoxications, and Miscellaneous Diseases. Sections on Typhus Fever, Relapsing Fever, Amebiasis, Kala-azar with attendant Noma, Ricin Poisoning, and the effects of Opium Smoking are specially interesting. The book provides a geographical study of disease and presents the conditions of medical practice among a people physically depressed by long continued modern warfare.

MILITARY MEDICINE, MEDICAL CLINICS OF NORTH AMERICA, Volume 25, Number 6, November, 1941. pp. 418, with 50 illustrations, Paper, $12.00 per clinic year, Cloth, $16.00 per clinic year. W. B. Saunders Company, Philadelphia and London.

The November number of Medical Clinics of North America has a Symposium on Military Medicine. In the Foreword, Rear Admiral Ross T. McIntire, Surgeon General of the Navy, notes the timeliness of the work. A noteworthy list of medical officers of the Army and Navy contribute to the symposium. Colonel Leonard G. Rowntree, M.R.C., U.S.A. and Lieutenant Colonel Albert N. Baggs, M.R.C., U.S.A. write on "The Physician in Selective Service and the Army," Major James B. Mason, M.C., M.C., U.S.A., on "Medical Organization in the Permanent Camp and in the Field." Following chapters cover Tuberculosis, Communicable Diseases, Cardiovascular Disease, Medical Abdominal Emergencies, Military Ophthalmology, Injuries of the Ear, Nose and Throat, Dermatology and Syphilology, Nutritional Aspects of Military Medicine, Psychiatric Aspects, Dressing and Transportation of the Wounded, X-ray Examinations of the Chest, Chemotherapy of Acute Infections, Shock and Burns, Minor War Injuries, Disorders of the Foot, and Gastro-intestinal Problems in Military Medicine.

The December number of Medical Clinics of North America will contain a Symposium on Military Surgery, headed by the Surgeon General of the United States Army.

TREATMENT OF THE PATIENT PAST FIFTY. By Ernest P. Boas, M.D., pp. 324, with 19 illustrations. Cloth, $4.00. The Year Book Publishers, Inc., 304 South Dearborn Street, Chicago, 1941.

Dr. Boas has written an interesting treatise on a difficult subject. The fact is that there are few diseases peculiar to advanced age but only the steady physical and pathetic mental decline which Ponce de Leon, Cagliostro and all the alchemists have sought vainly to overcome. There is no age limit to productive life but when usefulness has ceased deterioration is rapid. Unused machinery rusts and decays. When the aged become too tired to bathe they begin to smell; when the old man becomes too weary to stand erect his "back becomes bowed with a gentle kyphosis," he may develop the propulsive gait.

The problems of suicide and of euthanasia are not peculiar to advanced age. "Another is tormented with severe physical suffering to which there seems to be no end. Another is waiting execution in the electric chair, develops appendicitis and needs an emergency operation to make him whole again that he may be killed. Another is a brute or a criminal. Then there are the hordes of congenital imbeciles, of the hopelessly insane, who have become institutional wards of society." The physician can have no part in euthanasia; his mission is to save life. But sometimes we must choose; will we sacrifice the younger generations to provide sustenance for life useless to itself and to society. The physician can now decide that the purpose of science in medicine is not to prolong human suffering nor to extend the period of useless life.

This book is of the greatest interest to the general practitioner, whose day is increasingly occupied with "The Patient Past Fifty."

IMMUNOLOGY. By Noble Pierce Sherwood, Ph.D., M.D., F.A.C.P. Second edition, pp. 639, with 27 illustrations in the text and 7 color plates. Cloth, $6.50, The C. V. Mosby Company, St. Louis, 1941.

Beginning with a simple definition of infection, Dr. Sherwood leads the student step by step through the complexities of the entire subject of immunity. In the preface to his first edition he gave an idea of the scope of the subject:—to correlate some of the teachings of physiology, pharmacology, organic, biologic and physical chemistry as well as anatomy, pathology and general biology and

apply these teachings to the elucidation of the mysteries surrounding infection, resistance, and diagnostic procedures. In the second edition Dr. Sherwood has rearranged the chapters and some of their contents. Two new chapters have been added, one on the reticuloendothelial system and the other on serum reactions. The arrangement of the work is such that the student gradually becomes accustomed to the intricate nomenclature of advanced bacteriology and can read with minimum loss of time for referring to the dictionary.

DISEASES OF WOMEN. By Harry Sturgeon Crossen, M.D., F.A.C.S. and Robert James Crossen, A.B., M.D. Ninth edition, entirely revised and reset. pp. 948, with 1127 illustrations, many in color. Cloth, $12.50, The C. V. Mosby Company, St. Louis, 1941.

In the preface to the ninth edition of this standard work, the authors state, "The signal advance in recent years in gynecological diseases and treatment has come largely through intensive study of physiology. The areas where obvious anatomy disappears into the invisible processes of function constitute the frontiers of knowledge, where pioneers delve and struggle and gradually advance into the unknown. Here, the blood with its many activities, the nerves with their sympathetic and parasympathetic impulses, the muscle cells which change food into power, and the hormones and vitamins with their chemical and physical and vital functions, all work together to bring about those wonderful transformations, concerning which we have learned so much and yet, on the whole, know so little."

Simplicity of language and directness in statement make this work ideal for the student. It is a complete work of reference for the gynecologist. With its companion "Operative Gynecology", it keeps not only up to date but years ahead of its time.

INFANT NUTRITION. By Williams McKim Marriott, B.S., M.D., revised by P. C. Jeans, A.B., M.D. Third edition, pp. 475, with 31 illustrations, Cloth, $5.50. The C. V. Mosby Company, St. Louis, 1941.

The important contribution of Marriott to infant nutrition consisted in the replacement of empiricisms with scientific fundamentals and the establishment of the entire subject on a simpler, more logical and more common-sense basis. After discussion of the chemcial and physiological requirements of the infant, Marriott has an important chapter on breast feeding, followed by a discussion of artificial feeding for those cases where the infant is deprived of breast milk. For the nature and composition of various proprietary infant foods, he refers to the American Medical Association publication, "Accepted Foods and Their Nutritional Significance." Later chapters treat of malnutrition, diarrhoea, bacillary dysentery, vomiting, and the other diseases of infants which are due to faults in nutrition. Separate chapters on therapeutic procedures and on medication are included. The need for a third edition indicates the practical value of this work.

SCHIZOPHRENIA IN CHILDHOOD. By Charles Bradley, M.D. pp. 152, Cloth, $2.50, The MacMillan Company, New York, 1941.

This book of 152 pages presents a painstaking study of one of the particularly difficult subjects of psychiatry. The author, now at the head of an uncommon type of hospital, a hospital for nervous and mental diseases of children, has an unusual opportunity, of which he has made use.

He has studied and has tried to clarify a complex and voluminous literature, which often presents conflicting views, and then make the whole understandable. While not the easiest reading, his work is accurate and concise, and he has done it well. The history of the subject, symptomatology, causes, types, pathology, diagnosis, prophylaxis, treatment and prognosis, are all considered as concisely and accurately as possible. Special care has been given to a full bibliography of exceeding value. Personally studied and carefully selected case histories are presented to illustrate the subject.

While it is a small volume, it represents a great amount of critical work. It is to be desired that this monograph act as a nucleus to a fuller presentation as material developed.

NILES WESTCOTT, M.D.

THE MARCH OF MEDICINE, New York Academy of Medicine Lectures to the Laity, No. 6, pp. 154, Cloth, $2.00, Columbia University Press, Morningside Heights, New York, 1941.

This is the third volume to bear the same title in the series of New York Academy of Medicine Lectures to the Laity. The previous lectures were published in 1939 and 1940. The lectures in the present volume are "Humanism and Science" by Alan Gregg, M.D., "Paracelsus in the Light of Four Hundred Years" by Henry E. Sigarist, M.D., "Psychiatry and the Normal Life" by William Healy, M.D., "Philosophy as Therapy" by Irwin Edman, Ph.D., "The Promise of Endocrinology" by Oscar Riddle, Ph.D., "What We Do Know about Cancer" by Francis Carter Wood, M.D. There is a Foreword by Malcolm Goodridge, M.D. and an Introduction by Haven Emerson, M.D.

SULFANILAMIDE AND RELATED COMPOUNDS IN GENERAL PRACTICE. By Wesley W. Spink, M.D. pp. 256, with many charts and an exhaustive bibliography. The Year Book Publishers, Inc., Chicago, 1941.

This book portrays the present status of sulfonamide therapy, especially from the point of view of clinical application. The material for the presentation has been obtained from personal observation of over a thousand patients at the University of Minnesota Hospital and from a review of the literature. The bibliography cites more than 400 references. Indications for the use of these drugs, methods of administration, and precautions to be taken in their use are some of the topics covered. Controversial subjects are handled by publication of the controversial data from which the reader is permitted to draw his own conclusions.

ARTHRITIS IN MODERN PRACTICE, THE DIAGNOSIS AND TREATMENT OF RHEUMATIC AND ALLIED CONDITIONS. By Otto Steinbrocker, B.S., M.D. With Chapters on Painful Feet. Posture and Exercise, Splints and Supports, Manipulative Treatment, and Operations and Surgical Procedures. By John G. Kuhns, A.B., M.D., F.A.C.S. pp 606, with 321 illustrations mostly from original photographs, Cloth, $8.00, W. B. Saunders Company, Philadelphia and London, 1941.

While rheumatic disease is not often fatal it is the most prevalent form of chronic illness. Five per cent of our population suffer from some form of rheumatic disease. Among policy holders of the Metropolitan Life Insurance Co., the annual loss of wages due to rheumatism has been estimated at $200,000,000, not including medical care, drugs, hospitalization or nursing. Arthritis is a subject of prime interest to the medical practitioner.

This book covers etiology, diagnosis and treatment of the varied forms of arthritis; atrophic, hypertrophic, spondylitis, fibrositis, rheumatic fever, gout, traumatic joint disorders, painful shoulder, backache, sciatica, and the many others. It is a practical guide to the diagnosis and treatment of these disorders, which form so large part of medical practice in clinic and office.

Dr. John G. Kuhns, who won the 1936 Fiske Fund Prize Award for his essay on "Low Back Pain," contributes chapters to this book on Painful Feet, Posture and Exercises, Splints and Supports, Manipulative Treatment, and Operations and Surgical Procedures.

A glossary of signs, syndromes and other data related to rheumatic disorders is found at the back of the book. An extensive bibliography is broken down into the references at the end of each chapter.

DIABETES AMONG JEWS. FOURTEENTH ANNIVERSARY ISSUE OF THE HEBREW MEDICAL JOURNAL. Edited by Moses Einhorn, M.D. The Hebrew Medical Journal, 983 Park Avenue, New York City.

This volume presents a symposium on "Diabetes Among Jews." Participants include Drs. Joslin, Morrison, F. F. Allen, A. Rudy, A. J. Rongy, C. R. Bolduan, A. A. Epstein, and others. Drs. Bolduan and Morrison find that diabetes in 75% more common among Jews than among non-Jews, that four out of every hundred Jews over forty years of age have the disease, that six out of every hundred Jewish women over forty years of age have it. Dr. Bolduan holds that the total number of diabetics in New York City is 100,000, and conservatively estimates that about 600,000 people suffer from it in the United States.

These statistics have made diabetes an important health problem, and in their articles, Drs. E. Joslin, F. Allen, A. Rudy, and G. Ginsburg, discuss in detail the etiological factors of the disease. They all agree that, first, heredity accounts largely for the racial susceptibility of the Jews; then intermarriage between diabetics results in inbreeding of the disease; also, the special characteristics of the Jewish diet, which is rich in starch and carbohydrates (bread, butter, potatoes, cream and pastry). Additional factors are the frequency of obesity, which is a forerunner of diabetes, the tendency to be nervous and sensitive, and lack of exercise due to sedentary occupations.

Others taking part in the symposium are Drs. Albert Epstein, who contributes an article on surgery and diabetes, while A. J. Rongy and A. D. Seley write on pregnancy and diabetes, B. Jablons presents a study on peripheral vascular disease in diabetes, and A. Rest discusses tuberculosis in the Jewish diabetic.

INFANTILE PARALYSIS, ANTERIOR POLIOMYELITIS. By Philip Lewin, M.D., F.A.C.S., pp. 373, with 165 original illustrations and a complete bibliography. Cloth, $6.00, W. B. Saunders Company, Philadelphia and London, 1941.

In this comprehensive work on Infantile Paralysis, Dr. Lewin stresses the importance of early diagnosis and indicates the procedure to be followed in those cases where the diagnosis early in the illness is in doubt. He indicates the measures to be taken for prevention and control of the disease when epidemic, with instructions for the mother who must protect her children from infection. Treatment of infantile paralysis is covered exhaustively; the measures for saving life, the relief of pain, prevention of deformities, nursing care, mental rehabilitation. The book is recommended to the pediatrician, neurologist and orthopedist, and to the family physician.

MICROBES WHICH HELP OR DESTROY US. By Paul W. Allen, Ph.D., D. Frank Holtman, Ph.D., and Louise Allan McBee, M.S. pp. 540, with 102 text illustrations and 13 color plates. Cloth, $3.50. The C. V. Mosby Company, St. Louis, 1941.

A treatise on bacteriology prepared by members of the Department of Bacteriology in the University of Tennessee. The historical basis of bacteriology provides an abundance of material which is of great interest to the lay reader as well as to the scientist. This material is well utilized in the present work. Beginning with the Age of Superstition and the Age of Science, the influence of microbes on human life is traced up to the present. The book aims to give a knowledge of the effect of microbes in health, in disease and in every day life. It provides an interesting study for the lay reader with a scientific turn of mind.

THE ART AND SCIENCE OF NUTRITION. By Estelle E. Hawley, Ph.D. and Grace Carden, B.S. pp. 619, with 140 illustrations including 12 in color. Cloth, $3.50. The C. V. Mosby Company, St. Louis, 1941.

I especially like the excellent illustrations in "Hawley and Garden." Students learn and remember better if the special condition being studied can be pictured in their minds. The pages on "Table Manners" might well be stressed. Other food texts including this are few. Historical development is more detailed than most books and is therefore, of more interest.

On the whole, book is thorough and detailed; might well be used either as a textbook or as reference. Due to being quite technical in some sections it might be used as reference, although I do not see any reason why students should not be taught to interpret that technicality.

ELIZABETH AGNEW,
Dietitian at Rhode Island Hospital